

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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SEOUL SEMICONDUCTOR CO., LTD., *et ano.*

Plaintiffs,

-against-

SATCO PRODUCTS, INC.

Defendant.
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APPEARANCES:

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GARY R. BROWN, United States District Judge:

In this action, plaintiffs Seoul Semiconductor Co., Ltd. and Seoul Viosys Co., Ltd. (together, “SSC”) seek recovery for purported infringement of several U.S. Patents¹ against

¹ At issue are U.S. Patent Nos. 9,627,435; 9,716,210; 9,807,828; and 9,978,919.

**FILED
CLERK**

3:46 pm, Oct 15, 2021

**U.S. DISTRICT COURT
EASTERN DISTRICT OF NEW YORK
LONG ISLAND OFFICE**

MEMORANDUM AND ORDER

19-CV-4951 (GRB)

defendant Satco Products, Inc. (“Satco”), all relating to claimed inventions and improvements in light emitting diode (“LED”) technology. Both plaintiffs and defendant practice the subject technology, producing LED light bulbs and related products and components. Upon request of the parties, the Court conducted an expedited *Markman* hearing on October 6, 2021 to resolve claim construction issues as to certain disputed terms. This opinion follows.

Procedural History

On April 19, 2019, SSC commenced this action for patent infringement under 35 U.S.C. §§ 271, 281, 283, and 284 against defendant Satco. Docket Entry (“DE”) 1. On August 29, 2019, the case was transferred to this District from the U.S. District Court for the Southern District of Florida, DE 28, and on February 10, 2020 this case was reassigned from Judge Kiyo A. Matsumoto to the undersigned. Electronic Order dated Feb. 10, 2020. Former Chief Magistrate Judge Steven M. Gold presided over the lion’s share of this dispute, handling the intervening litigation, including supervision of the *Markman* process. *See, e.g.*, DE 60. Plaintiffs and defendant filed their claim construction briefs in July and August 2020. DEs 56, 65. Unfortunately, the intercession of the COVID-19 pandemic substantially delayed the hearing; a stay pending the *inter partes* review (IPR) and Judge Gold’s retirement further postponed the case. On October 6, 2021, the Court held a *Markman* claim construction hearing. Neither side produced testimony.

Claim Construction Standards

Several years ago, then-district court Judge Joseph Bianco penned a cogent, thorough description of the applicable standard for a *Markman* hearing:

Claim construction is “exclusively within the province of the court.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). Such construction “begins

and ends” with the claim language itself, *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998), but the court may consult extrinsic evidence “if needed to assist in determining the meaning or scope of technical terms in the claims,” *Pall Corp. v. Micron Separations, Inc.* 66 F.3d 1211, 1216 (Fed. Cir. 1995); see *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996) (explaining that the court may rely on extrinsic evidence, including expert and inventor testimony, dictionaries, and learned treaties).

In construing the claim language, the court must begin with the principle that “the words of a claim ‘are generally given their ordinary and customary meaning.’” (*Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (quoting *Vitronics*, 90 F.3d at 1582)). This ordinary and customary meaning “is the meaning that the [claim] term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application.” *Id.* at 1313. “[T]he person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

“In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314. “In such circumstances general purpose dictionaries may be helpful.” *Id.* In other cases, “determining the ordinary and customary meaning of the claim requires examination of terms that have a particular meaning in a field of art.” *Id.* In those cases, “the court looks to those sources available to the public that show what a person of skill in the art would have understood the disputed claim language to mean.” *Id.* (internal quotation marks and citation omitted). These sources include “the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Id.*

When the specification reveals a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess, the inventor’s lexicography governs. *Id.* at 1316. Nevertheless, it is improper to read limitations from the specification into the claim. *Callicrate v. Wadsworth Mfg., Inc.*, 427 F.3d 1361, 1368 (Fed. Cir. 2005) (“[I]f we once begin to include elements not mentioned in the claim, in order to limit such claim ... we should never know where to stop.” (quoting *Phillips*, 415 F.3d at 1312)). Thus, the court “do[es] not import limitations into claims from examples or embodiments appearing only in a patent’s written description, even when a specification describes very specific embodiments of the invention or even describes only a single embodiment, unless the specification makes clear that ‘the patentee ... intends for the claims and the embodiments in the specification to be strictly coextensive.’” *JVW Enters., Inc. v.*

Interact Accessories, Inc., 424 F.3d 1324, 1335 (Fed. Cir. 2005) (internal citations omitted).

Easyweb Innovations, LLC v. Twitter, Inc., 2016 WL 1253674, at *5 (E.D.N.Y. Mar. 30, 2016), *aff'd*, 689 F. App'x 969 (Fed. Cir. 2017); *Soter Technologies, LLC, v. IP Video Corporation, et al.*, 2021 WL 4553188, at *1-2 (E.D.N.Y. Oct. 5, 2021) (same). The Federal Circuit has further held:

Claim construction seeks to ascribe the meaning to claim terms as a person of ordinary skill in the art at the time of invention would have understood them. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc) (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). In an IPR proceeding, claims are given their broadest reasonable interpretation in light of the specification. *In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1279 (Fed. Cir. 2015), *cert. granted sub nom. Cuozzo Speed Techs., LLC v. Lee*, — U.S. —, 136 S.Ct. 890, 193 L.Ed.2d 783 (2015). In construing terms, “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313. Indeed, the specification is “the single best guide to the meaning of a disputed term” and “[u]sually, it is dispositive.” *Id.* Thus, “claims ‘must be read in view of the specification, of which they are a part.’ ” *Id.* at 1315 (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996)).

SAS Inst., Inc. v. ComplementSoft, LLC., 825 F.3d 1341, 1347 (Fed. Cir. 2016), *rev'd and remanded on other grounds sub nom. SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 200 L. Ed. 2d 695 (2018). With this standard in mind, the Court turns to the disputed claim terms.

Discussion

At the hearing, both sides presented excellent summaries of the complex and remarkable technology underlying the instant dispute, which provided useful background for the Court. The disputed claim terms, however, mainly prove far more pedestrian, obviating the need to reproduce the technical information here. Before the hearing, counsel appropriately met and conferred, significantly reducing the number of disputed claim terms, resulting in conservation of judicial

resources and substantial cost savings for the litigants. Counsel identified the following nine disputes:

Dispute Number	Patent	Disputed Term	SSC Proposed Construction	Satco Proposed Construction
12	9,627,435	“second insulation layer”	Plain and ordinary meaning or a second layer of material that lacks conductivity.	An insulation layer that protects the second conductive material and first insulation layer.
13	9,716,210	“near the active region”	Plain and ordinary meaning or close to the active region.	Plain meaning, <i>i.e.</i> “near the active region” is mutually exclusive of the active region.”
15		“adjacent”	Plain and ordinary meaning or near.	Plain meaning, <i>i.e.</i> , directly next to.
16	9,807,828	“dimming level detector configured to detect a dimming level corresponding to the drive voltage”	A circuit that detects a signal corresponding to the drive voltage and outputs a detected dimming level to the LED driving module.	Ordinary meaning: a circuit that normalizes the drive voltage in order to produce a voltage that represents the dimming level, as shown for example in Figure 6.
17		“block the drive current”	Plain and ordinary meaning, or in the alternative, obstruct the drive current.	Plain meaning, <i>i.e.</i> , stop the flow of the drive current.
18		“LED driving module” ²	A module having components arranged to power light emitting diodes.	Definition in specification: A module configure[d] to drive and control a light emitting diode after receiving AC voltage (this term should be comprehensively and broadly interpreted).
20	9,978,919	“has a different shape” ³	The geometric outline of the space between the two top leads is different from the geometric outline of the space between the two bottom leads.	Plain meaning, <i>i.e.</i> , shapes are different when they are not geometrically “similar,” <i>i.e.</i> when one shape cannot be obtained from the

² Upon the consent of the parties, this was modified from the ellipsis-ridden phrase “LED driving module . . . configured to . . .”

³ This is excerpted from a much longer phrase; the parties’ dispute arises only from the words quoted.

				other shape by uniformly scaling (enlarging or reducing), possibly with additional translation, rotation and reflection.
21		“bend”	Plain and ordinary meaning or a curved or angular change in direction.	Plain meaning: a change in the primary direction of the first portion.
22		“fine protrusion”	Plain and ordinary meaning or a narrow projection from a structure.	A portion of the lead that extends from the side surface a distance that is less than the distance extended by the at least one protrusion.

DE 116-1. The Court hereby construes the claims as follows:

A. Disputes 12, 13, 21, 22: It Is What It Is.

The Federal Circuit has upheld a *Markman* determination by a district court that “declined to further construe [a] term because it was a ‘straightforward term’ that required no construction.” *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1291 (Fed. Cir. 2015). Claim construction “is not an obligatory exercise in redundancy.” *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Several disputed terms – “second insulation layer,” “near the active region,” “bend” and “fine protrusion” – simply do not require construction by the Court. *See, e.g., Gestion Proche, Inc. v. Dialight Corp.*, No. 4:16-CV-407, 2017 WL 2834695, at *11, *14, *18 (E.D. Tex. June 30, 2017) (giving the terms “illumination groups,” “illumination lighting device,” “lighting device” and “test light emitting diodes” their plain meaning because no construction is necessary in light of the context provided by surrounding claim language) (citing *Summit 6, LLC*, 802 F.3d at 1291). In several cases, defendant urged the Court to read the term in a manner that incorporated some additional qualification. But in each instance, defendant failed to provide persuasive

argument or evidence to support its position. Clearly, the ordinary meanings of the words suffice for these purposes and these disputed terms – “second insulation layer,” “near the active region,” “bend” and “fine protrusion” – require no further construction.

B. Disputes 15 & 17: What do you mean?

In several cases, the parties seemed to agree that a plain reading suffices, but disagree as to the ordinary meaning of the words. Nevertheless, the disputes prove, largely, illusory.

As to the meaning of “adjacent,” plaintiffs urge the Court to adopt a definition that suggests that adjacent means “near,” whereas defendant suggests the conventional – and appropriate – definition of “next to.” The *Oxford English Dictionary* defines adjacent as “[n]ext to or very near something else; neighbouring; bordering, contiguous; adjoining.” www.oed.com. The *Cambridge Dictionary* similarly suggests “very near, next to, or touching.” www.dictionary.cambridge.org. Thus, defendant’s construction of adjacent as “directly next to” proves appropriate.

Of lesser moment is the question of “block the drive current.” Both parties advocate for a plain reading, but plaintiffs posit “obstruct,” whereas defendants offer “stop.” The nuances here seem irrelevant. In doing so, this Court is, as it must, conducting “claim interpretation based solely on the claim language and the context of the patent. . . . [while] lack[ing] the full context of this infringement action” *Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1330 (Fed. Cir. 2006). As such, the Court will simply use “block” and declines to construe the term further.

C. Disputes 16 & 18: We Can Work It Out.

During the hearing, the parties, working with the Court, rolled up their proverbial sleeves to resolve two disputes. The first, disputed term 16 – “dimming level detector configured to detect a dimming level corresponding to the drive voltage” – shall, upon consent of the parties, be

construed to mean “a circuit that detects a dimming level, *i.e.* a level by which to dim the light output by the LED, and outputs that level to the LED driving module.”

The second resolved dispute turned on the phrase “LED driving module.” At the hearing, once plaintiffs agreed that the LED driving module is a separate component from the dimming level detector, defendant consented to plaintiffs’ proposed construction. With that understanding, the Court adopts plaintiffs’ proposed construction.

D. Dispute 20: Some Things Are More Complicated Than They Seem

Construction of the term “different shape” should be easy. We learn to differentiate shapes early on. Kindergarteners can readily group shapes into those that are similar and those that are different. Even before their formal education begins, children learn such distinctions from parents, toys, electronic games and television programming. Indeed, Muppets and humans occupying *Sesame Street* have imparted differentiation of shape, number, size and color to countless millions of children, using an iconic ditty entitled “One of These Things Is Not Like the Others”:



Sesame Street teaches shape differentiation

So the task before the Court – construing the term “different shape” as applied to two areas within the invention covered by the ’919 patent – should be, well, child’s play. That it is not a simple question reflects both the nature of claim construction and a peculiarity in the prosecution history of the ’919 patent.

“Victory in an infringement suit requires a finding that the patent claim covers the alleged infringer’s product or process,” the Supreme Court observed in *Markman*, “which in turn

necessitates a determination of what the words in the claim mean.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 374, 391 (1996) (citations and internal quotation marks omitted) (holding that “interpretation of the word ‘inventory’ in this case is an issue for the judge, not the jury”). From its inception, the Supreme Court recognized that the procedure represented something unusual, as claim construction had “no exact antecedent” in common law. 517 U.S. at 378. And this process – interpreting the words of a claim so as to have them properly applied by the finder of fact to the accused product – occurs in a kind of intellectual vacuum.

The Federal Circuit has repeatedly cautioned that “claims may not be construed with reference to the accused device.” *Wilson*, 442 F.3d at 1330 (noting that “a court may not use the accused product or process as a form of extrinsic evidence to supply limitations for patent claim language”).⁴ To be sure, this approach rests upon a sound principle:

the rule forbids a court from tailoring a claim construction to fit the dimensions of the accused product or process and to reach a preconceived judgment of infringement or noninfringement. In other words, it forbids biasing the claim construction process to exclude or include specific features of the accused product or process.

Id. at 1331. For courts unaccustomed to, and generally prohibited from, rendering advisory opinions, this procedure falls outside of jurisprudential norms and, sometimes, draws uncomfortably close to a constitutional boundary. *See, e.g., Superior Indus., Inc. v. Masaba, Inc.*, 553 F. App’x 986, 989 (Fed. Cir. 2014) (“It is impossible for us to determine from this opinion which of the thirteen contested claim constructions would ‘actually affect’ the infringement analysis. This poses a risk that our review of at least some of these constructions would amount

⁴ This well-established rule was invoked during the hearing when counsel for defendant displayed a slide that depicted the accused technology during his argument relating to “different shape,” drawing an objection from plaintiffs’ counsel. Transcript dated Oct. 6, 2021 at 151:6-7. Fortunately, the slide – a murky, X-ray-like rendering, proved meaningless to the Court, and has been disregarded for the purposes of this opinion. Moreover, “the ‘reference’ rule . . . does not forbid any glimpse of the accused product or process during or before claim construction.” *Wilson*, 442 F.3d at 1331.

to an advisory opinion.”); *Jang v. Bos. Sci. Corp.*, 532 F.3d 1330, 1336 (Fed. Cir. 2008) (“[W]e would risk rendering an advisory opinion as to claim construction issues that do not actually affect the infringement controversy between the parties.”).

Construing the term “different shape” demonstrates the difficulties arising from deciding these matters in the abstract. Many of the tools generally employed prove of little assistance. Common usage dictionaries do not define the phrase, and defining each individual word does not help. “Different shape” is not a technical term requiring the assistance of a person of ordinary skill in the art. This leaves common understanding of the term and its logical applications.

Consider, for example, two triangles of different sizes. Are they the same shape? Of course – even the Muppets could handle that one. But say one of the triangles is equilateral and the second a right triangle – are these different shapes? Reasonable minds could disagree. And while the parties abandoned any argument about size, they are divided on the question of proportion. After all, a square, given a different proportion, is no longer a square but becomes a rectangle, logically and etymologically a different shape. And proportion seems to be the key to this dispute.

One academic article relating to object matching provides some food for thought.⁵ Consider the following illustration and commentary from that paper:

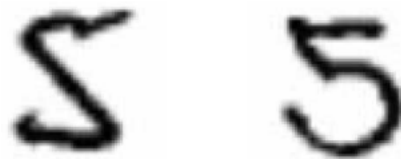
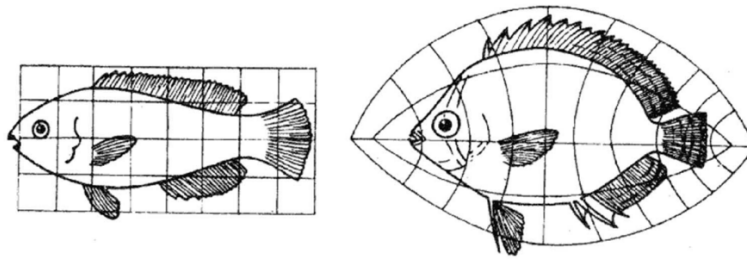


Fig. 1. Examples of two handwritten digits. In terms of pixel-to-pixel comparisons, these two images are quite different, but to the human observer, the shapes appear to be similar.

⁵ See Belongie, *et al.*, *Shape Matching and Object Recognition Using Shape Contexts*, 24 IEEE TRANSACTIONS ON PATTERN ANALYSIS & MACH. INTELLIGENCE 24 (Apr. 2002), available at <https://www2.eecs.berkeley.edu/Research/Projects/CS/vision/shape/belongie-pami02.pdf>.

Later, though for different reasons, the authors provide the following illustration:



Undoubtedly, these two renderings are very different, but they both convey the shape of a fish.

Plaintiffs mysteriously avoid advocating for the “plain meaning” of this term, instead urging the Court to consider adding “the geometric outline of the space between the two top leads is different from the geometric outline of the space between the two bottom leads.” Defendant’s proposal seems even more arcane, advocating for the plain meaning of “different shape,” yet contending that that unadorned definition reads as follows:

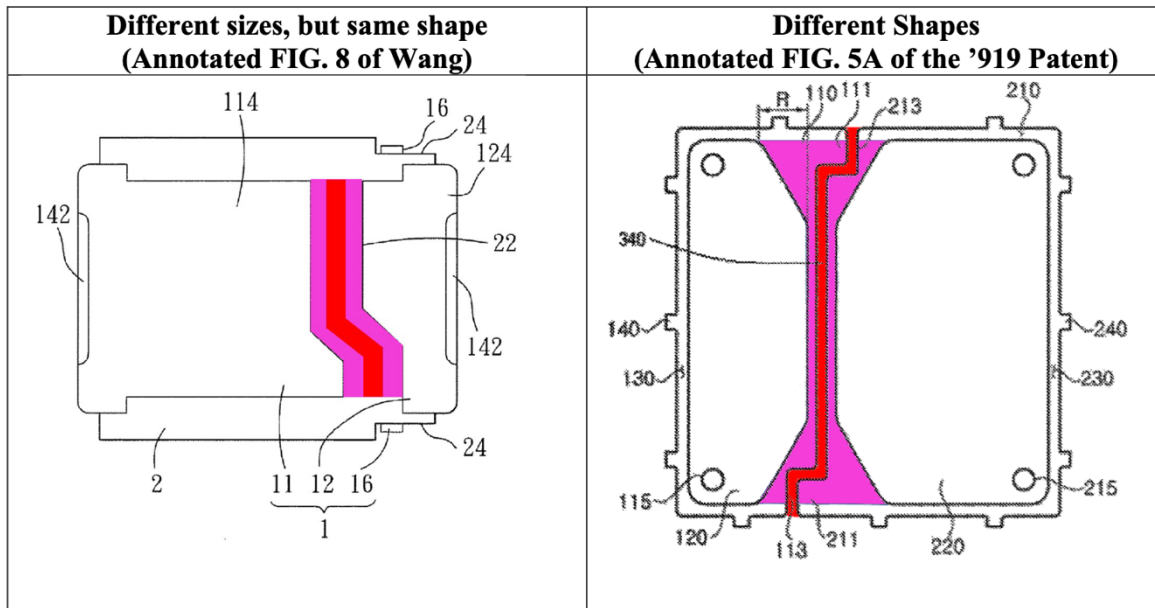
shapes are different when they are not geometrically “similar,” *i.e.* when one shape cannot be obtained from the other shape by uniformly scaling (enlarging or reducing), possibly with additional translation, rotation and reflection.

Despite their considerable talents, it is probably unlikely that the Muppets could set this iteration to music.

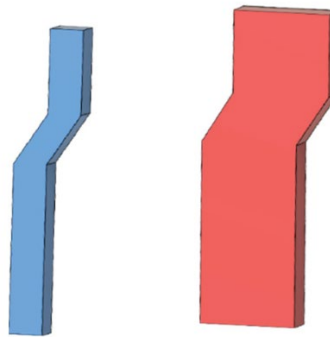
What’s going on here? It turns out that the parties’ efforts at wordsmithing emanates – at least in part – from the prosecution history of the ’919 patent. In its effort to distinguish its invention and “avoid institution,”⁶ plaintiffs contended that prior art introduced by defendant during IPR involved “two regions that have different sizes, not different shapes.” DE 66-16 at 7.

⁶ DE 56 at 35, citing IPR2020-00151 (paper 6) (Ex. 16); *see Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1364–65 (Fed. Cir. 2016) (“IPR proceedings involve two distinct phases: (1) the institution phase, beginning with the filing of an IPR petition and culminating in the decision of whether to institute an IPR proceeding (‘institution decision’); and, if instituted, (2) the merits phase, beginning after the Board’s institution decision and culminating in the Board’s determination of patentability in light of the instituted ground(s) (‘final written decision’).”).

To drive this distinction home, plaintiffs provided the following illustration to the Patent Trial and Appeal Board:



DE 66-16 at 8. The rub lies in the illustration on the left: plaintiffs deemed the red and purple zones to constitute the “same shape.” In other words, physically extrapolating from the diagram, plaintiffs took the position that the following figures are not “different shapes”:



DE 65 at 59. Are these “zig-zags” different shapes? Similarity is beyond question, yet depending on the connotations associated with the phrase, these *might* be “different shapes.” To distinguish

its invention from the proffered prior art, plaintiffs maintained, and continue to maintain, that the above are the same shape.

The *Markman* framework provides a solution for this type of problem. Defendant invokes the doctrine of prosecution disclaimer to argue that, in contending that the above figures represent the same shape, plaintiffs have disavowed their claim to the full scope of “different shape.” DE 65 at 58 (citing *Sumitomo Dainippon Pharma Co. v. Emcure Pharms. Ltd.*, 887 F.3d 1153, 1158 (Fed. Cir. 2018) (“the ordinary and customary meaning controls unless . . . the patentee disavows the full scope of a claim term either in the specification or during prosecution”) (citation omitted)). The Federal Circuit has extended this doctrine to IPR proceedings, holding that “statements made by a patent owner during an IPR proceeding can be considered during claim construction and relied upon to support a finding of prosecution disclaimer.” *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1360–61 (Fed. Cir. 2017) (noting that “[e]xtending the prosecution disclaimer doctrine to IPR proceedings will ensure that claims are not argued one way in order to maintain their patentability and in a different way against accused infringers”). The Circuit cautioned, however, that to support application of the doctrine, the statements must “constitute a clear and unmistakable surrender of claim scope.” *Id.* at 1362. Given the unequivocal articulation of this point by plaintiffs at the IPR (a position it maintained at the *Markman* hearing), plaintiffs have disavowed, for the purpose of construing these claims, that a “different shape” does not include a space of similar shape, but of different proportion.

Having determined that plaintiffs have disavowed the assertion of “different shape” as against spaces of similar shape but different proportion, I find that neither plaintiffs’ nor defendant’s proposed constructions prove helpful in capturing this nuance. Thus, the Court will

construe plaintiffs' claim to spaces of a "different shape" to have its plain meaning, but with the understanding that shapes distinguishable by proportion do not fall within its ambit.

Conclusion

Based on the foregoing, the Court construes the disputed terms in the patents in the manner set forth herein.

SO ORDERED.

Dated: October 15, 2021
Central Islip, New York

/s/ Gary R. Brown
GARY R. BROWN
UNITED STATES DISTRICT JUDGE